

**ABSTRACT OF THE INVENTION**

Rheology-modified, gel-free thermoplastic elastomer compositions comprising a melt blend of an ethylene/ $\alpha$ -olefin polymer and a high melting polymer such as polypropylene or a propylene/ $\alpha$ -olefin copolymer wherein the rheology modification is induced by a combination of a peroxide and a free radical coagent in a peroxide:coagent ratio of 1:4 to 1:20 and a maximum peroxide concentration of 0.075 wt%. The resulting compositions have an elastomeric phase, a non-elastomeric phase and certain physical properties that exceed those of a like composition that is rheology-modified by peroxide alone or peroxide and coagent in a 1:2 to 2:1 ratio. The compositions are used to make a variety of articles of manufacture, such as tubing and weatherstripping, via calendaring, extrusion, and molding techniques such as blow molding.